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ABSTRACT

Interpersonal interaction in intimate relationships must be viewed as a function of the context within which it occurs. A contextual model of interaction was studied along the dimensions of conflict and intimacy. Subjects were married couples, who individually discussed conflict and nonconflict issues of high-level or low-level intimacy. Patterns of sequential interaction were analyzed as a function of the contextual dimension in which they occurred. Data analysis revealed several patterns of sequential interaction that were functionally related to various contextual configurations. Contextual analysis of interaction could be expanded to include not only perceptual, attributional, and environmental antecedents of behavior, but also previous behavior within the interactional stream: specific behavior could be considered a context for further behavior. Treatment of dysfunctional marital or family relationships based on a contextual model could target intervention toward specific behavioral changes, rather than toward global improvements in the relationship. (Author/CS)

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Sequential Patterns of Behavior Control in Marital Interaction[1]

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Running Head: Marriage and Conflict

[1]The present study represents portions of data from a doctoral dissertation conducted under the supervision of James F. Alexander, Ph.D., Dept. of Psychology, University of Utah. Appreciation is extended to James Alexander, Karen Wampler, and David Young for their assistance with earlier drafts of this paper.

Sequential Patterns of Behavior Control in Marital Interaction

Patterns of social interaction behavior for intimate relationships are intriguing and complex phenomena. Social interaction provides not only a source of rewarding and pleasureful activity, but punitive and painful exchanges as well. Interpersonal behavior cannot be understood simply as a product of the individual, but must be viewed as a function of the context within which it occurs (Angyal, 1941; Cairns, 1979; Endler & Magnusson, 1976; Kantor, 1924, 1926; Lewin, 1935, 1936; Magnusson & Endler, 1977; Sells, 1963). Within recent sources for the discussion of social interaction (Cairns, 1979; Ginsburg, 1979), it has been suggested that studying interaction as a function of the situation has been long overlooked (Argyle, 1979), and that settings or contexts are becoming increasingly important in the analysis of interpersonal behavior (Ginsburg, 1979). Marital and family functioning provides an arena within which to understand social interaction patterns and the factors which control them.

Social learning theorists (Mischel, 1968 and others) assume the general importance of environmental or stimulus control of behavior; thus, to the extent that contextual variations function to discriminate one pattern of behavior from another, the context is a source of stimulus control for interaction. Social learning principles have been applied to marital and family relationships (Stuart, 1969; Patterson, 1979; Patterson, Cobb & Ray, 1972) where the context or environmental setting plays an important role in both assessment and treatment planning processes.

The pragmatic approach to social interaction (Fisher, 1978; Watzlawick, Beavin, & Jackson, 1967) focuses on interdependent relationships among

components of a communication system. Components of a social system involve those individuals within the system as well as the psychological, perceptual, and social contexts within which the individuals operate. The family system has become the focus of analysis and intervention in models of marital and family therapy (Alexander, 1973; Alexander & Barton, in press; Barton & Alexander, in press; Barton & Alexander, 1977; Haley, 1971, 1976).

Researchers have studied social interaction as a function of various stimulus or contextual events, including the nature of the task around which interaction occurs (Morton, 1976; O'Neill & Alexander, 1972; Raush, Barry, Hertel & Swain, 1974), the nature of the relationship unit, e.g., intact vs. stranger dyads (Morton, 1976), distressed vs. non-distressed couples (Billings, 1979; Birchler, Weiss, & Vincent, 1975; Birchler, Weiss, & Wampler, 1972; Vincent, Weiss, & Birchler, 1975; Weiss, Hops, & Patterson, 1973), and delinquent vs. normal families (Alexander, 1973; Barton & Alexander, 1979), Developmental stages of marital relationships (Raush et al., 1974), and differential power status attributed to sex role stereotypes (Johnson, 1976; Lips & Colwill, 1978; Lockheed & Hall, 1976; Weisstein, 1971).

These stimulus conditions have been studied as contexts for defensiveness and talk time (Alexander, 1973; Barton & Alexander, 1979), positive and negative exchanges (Birchler et al., 1975; Birchler et al., 1972; Gottman et al., 1976; Olson & Ryder, 1970), facilitative and disruptive behaviors (Patterson, Hops, & Weiss, 1975), and other forms of interpersonal exchange such as coercive, rejecting, and resolving behaviors

(Raush et al., 1974). However, little effort has been made to compare interaction processes which occur in the context of conflict with other contexts for interaction.

Conflict, defined as a context for social interaction, represents a departure from more common usages of the term. Miller and Simons (1974) suggest that struggles with the definition of conflict lie in the distinction between objective or external notions of conflict and phenomenological definitions based on perception. They offer a definition of conflict as, "the state of a social relationship in which incompatible interests between two or more persons give rise to a struggle between them (p. 177-178)." Coser (1967, p. 8) defines conflict as, "a struggle over values and claims to scarce status, power, and resources in which the aims of the opponents are to neutralize, injure, or eliminate the rivals." Deutsch (1969) indicates that conflict is the occurrence of incompatible activities; an action which is incompatible with another, "prevents, obstructs, interferes with, injures, or in some way makes its action less likely or less effective (p. 7)." Altman and Taylor (1973) indicate that the role of conflict is essential to the developmental process of relationships, but that, "little is known about the social exchange processes that occur as people attempt to cope with conflict (p. 173-174)." Miller (1974) proposes that ones definition of social conflict must be practically dictated by the nature of the problem that is being pursued. He cautions that acceptance of a particular conceptual or definitional stance fixes in places certain priorities for research. He suggests a continual interplay between

construct definition and problem selection or methodology.

Contextual Model of Interaction

Conflict

A more useful approach to conceptualizing conflict is to define conflict as a specific situational context, distinct from other contexts, within which overt interaction may occur and for which consequences or outcomes of that interaction can be determined (Douglas, 1979). Conflict should be considered as only one of many contextual factors that define the antecedents in interpersonal behavior. A contextual model for the analysis of interaction in a context of conflict provides for a more comprehensive understanding of social interaction, one which could potentially integrate previous definitions of conflict.

The first component of the proposed model is the situational, or contextual, one. It is the antecedent condition which defines the existence of conflict in the first place. The second component of the model includes behavioral or interaction processes that occur within the presence of a given context. The final component of the conflict model is defined by outcomes or consequences following as a product of the interaction process.

A contextual model of conflict incorporates the components of social learning theory within a conceptual framework of systems theory. Social learning theory contributes to the model by emphasizing the importance of three structural and functional components for the analysis of interaction processes: antecedent stimuli, behavior, and consequent stimuli. The influence of a specific context for interaction, namely

conflict, is considered as a discriminative function for interaction processes. Systems theory impacts the model in two ways. First, systems theory bears importance by defining the antecedent-interaction-outcome components not only as temporarily and functionally related, but also as interactive, each with the others. For example, the interdependence of context and behavioral sequences is represented by a continual redefinition of the situation as a function of behavior and by selection of behavior as a function of the situation. The second way that systems theory is important for the model is that interaction processes are defined as a unique product of a specific configuration of antecedent conditions, including the context of conflict. The combination of contextual influences, which operate simultaneously, produce a non-summative impact (Rapoport, 1968; Watzlawick et al., 1967) on the interaction process. Thus, the context of conflict is thought to influence interaction differently depending upon the combination in which it occurs with other contexts.

A contextual model of conflict is analogous to models of power presented by French and Raven (1960) and Olson and Cromwell (1975). Each model of power distinguishes between antecedent conditions, behavioral processes, and consequent conditions or outcomes. French and Raven (1960) define the components as social power, social influence, and psychological change, respectively; whereas Olson and Cromwell (1975) describe the components as bases of power, power processes and power outcome respectively.

A contextual model of interaction alleviates the problem of determining apriori which behaviors are characteristic of interaction within a given context, for example conflict. The model instead can include the analysis of any interaction processes, those which are believed to be stereotypic of certain contexts as well as others which are perhaps functional but less well recognized. A contextual model of interaction for studying conflict thus allows for an empirical approach to the selection of functional interaction measures relevant to conflict. Kendon (1979) states that, "...we cannot, at the outset of an investigation, exclude any aspect of behavior from the possibility that it may be functional in the communication system (p. 71)." The definitional problem is shifted from the behavior to the context. For the researcher, experimentally designing conflict and non-conflict situations or controls, has become a common experimental procedure (Birchler, et al., 1975; Douglas, 1979; Olson & Ryder, 1970; Raush et al., 1974; Vincent et al., 1975). For the theorist, defining the context of conflict is less straightforward; however, defining conflict as behavior instead of as context does not seem to circumvent the definitional problem.

Intimacy

Topical intimacy, or the intimacy level of the issue around which interaction occurs, is another context within which to study interaction processes and consequent outcomes. Social penetration theory (Altman, 1973) suggests that relationship development is characterized by an increasing level of intimacy, both in the interactions that occur and

for the issues about which they occur. Morton (1976) demonstrated a congruence between the topical level of intimacy, as selected by subjects, and their subsequent level of descriptive intimacy in the interaction processes used to discuss the issues.

The nature of the issues used by Raush et al. (1974) was defined along the dimension of instrumental vs. relationship issues. A careful inspection of those issues suggests that the distinction between instrumental and relationship issues is confounded by differences in topical intimacy. For example, television show or restaurant choices, individual tidiness, and car or household care tasks, all of which represent instrumental issues, can be readily contrasted by their level of topical intimacy with relationship issues of jealousy, sex, and time spent together. Raush et al. (1974) found that differences in interaction could be predicted from knowing whether they were associated with instrumental vs. relationship issues. It is argued that topical intimacy may serve as a more conceptually relevant contextual dimension than the instrumental-relationship distinction for predicting interaction processes.

Behavior Control

Every social act involves power (Coser, 1956; Hawley, 1973). The use of power, or power processes, are considered synonomous with attempts at behavior control. The relationship between conflict and behavior control or power is not yet well defined for marital and family relationships (Olson, Cromwell, & Klein, 1975) althouth its importance seems evident.

Behavior control represents a process which is relevant to all contexts of interaction and yet which has particular import for the context of conflict.

By defining behavior control as a form of interaction which occurs within a given context, it is possible to separate behavioral processes from antecedent contexts, that is, to separate conflict or intimacy from the behavior control processes which occur within these contexts. A contextual model of interaction facilitates analysis of specific contexts, such as conflict or intimacy, as discriminative for differential interaction processes such as behavior control.

Reciprocity

The importance of communicational reciprocity is becoming more recognized in the study of social interactions for intimate relationships. Typically, analysis has been limited to symmetrical reciprocity, or for the marital relationship, the patterning of one form of behavior by a spouse followed sequentially by identical or similar behavior of the other spouse. The symmetrical reciprocity or "positive" verbal behavior is central to successful marriages according to some authors (Azrin, Naster, & Jones, 1973; Lederer & Jackson, 1968; Stuart, 1969; Weiss et al., 1973). Gottman et al.(1976), however, consider the lack of symmetrical reciprocity of "positive" exchanges, as indicative of successful marital relationships The absence of symmetrical reciprocity for "negative" behavior has been found to be important for distinguishing non-distressed from distressed couples (Billings, 1979). Limited work has been done with the notion of asymmetrical reciprocity, the patterning of a form of behavior by one person followed sequentially by a dissimilar form of behavior by a second person. Raush et al. (1974) studied symmetrical and asymmetrical patterns of sequential interaction for marital couples. They found a tendency for

symmetrical reciprocity to occur within situations of interpersonal conflict for most behavioral categories. Exceptions were patterns of asymmetrical reciprocity found for rejecting acts followed by emotional appeals or coercive tactics.

Present Study

The present investigation was designed to examine patterns of communication behavior, symmetrical and asymmetrical reciprocity, as a function of two contextual dimensions, conflict and intimacy. A basic assumption about marital relationships is that spouses are continually in a process of constraining each other's behavior by the intentional and unintentional use of behavior control strategies. All behavior within the marital relationship is assumed to be communicative, that is, to have message value at both the content and relationship levels (Watzlawich et al., 1967). All behavior is assumed to have the potential for operating as a means of control in the relationship, although certainly all behavior does not function to do so.

The importance of contexts for marital behavior rests on the assumption that marital interaction is subject to various forms of stimulus control, one of those being the antecedent context within which interaction occurs. Marital interaction is assumed to be the product of a system of interdependent components, including the context for interaction. Conflict is an especially salient context for marital relationships since conflict is assumed to be inevitable for all intimate relationships (Coser, 1956; Simmel, 1955). Intimacy is a second important

context within which to study marital behavior since both topical and descriptive intimacy are central to the definition of intimate relationships (Altman, 1973).

The present study contributes to our understanding of marriage as a dynamic relationship, subject to environmental and contextual influences on interaction between spouses. Implications extend beyond increasing our knowledge of normative interaction processes for marital relationships to applications for clinical intervention with marital dsyfunction.

Sequential verbal interactions of wives and husbands, engaged in discussion tasks, were rated for their theoretically-based function of behavior control of spouse's behavior. Multivariate regression procedures were used to describe the relationship between the contextual variables, conflict and intimacy, and the interaction processes of behavior control.

Method

Subjects

Subjects were thirty-seven married couples that were recruited for participation through newspaper advertisements. Criteria for inclusion of couples in the study were, (a) written response "yes" by both spouses to the question, "Are you happily married", (b) a minimum score of 100 for both spouses on the Locke-Wallace Short Marital Adjustment Text (Locke & Wallace, 1959), and (c) uninvolvement of both spouses in therapy at the time of the study. All subjects were Caucasian. Husbands' and wives' mean ages were 31 and 29 years, respectively; the ages ranged from 19 to 61 years. Eighty-four percent of the couples were involved in their first

marriages. Fifty percent of the couples had one or two children and 21% of the couples had no children. Fifty-eight percent of the subjects reported a religious preference for the Church of Jesus Christ of the Latter-Day Saints, and all couples resided in Salt Lake City, Utah.

Procedure

Wives and husbands individually completed demographic questionnaires upon arrival to the laboratory. Couples were then given written instructions for the interaction phase of the study. The format for the interaction procedure was similar to that of the improvisation scenes of the Inventory of Marital Conflicts (Olson & Ryder, 1970). That is, couples were asked to discuss a series of issues for which each spouse was given an identical or a dissimilar perspective to adopt for purposes of the discussion. Those issues for which spouses were given identical perspectives were used to define the context of non-conflict; conversely, those issues for which spouses were given contradictory perspectives were used to define the context of conflict. Half of the issues contained high level intimacy content, and the remaining half contained low level intimacy content. The intimacy level of the issues was assigned consistently with Malouf (1974) and Taylor and Altman's (1973) analyses for intimacy-scaled stimuli. The couples were asked to discuss the issues, or scenes, for a maximum of five-minutes each. Couples ratings of topical intimacy and relevancy corresponded to intended experimental manipulations, indicating generality from the laboratory to home settings.

All couples were presented with two warm-up scenes and four experimental scenes. Only data from the experimental scenes are presented here.

The order of presentation for the four experimental scenes was counterbalanced across subjects. Couples required about one hour and fifteen minutes to complete all experimental procedures.

Coding Procedures

Spouse interactions were coded using the Behavior Control Strategies in Dyadic Interaction Coding Manual (Douglas, 1979). The coding system is based on principles of social learning theory applied to verbal communication in personal relationships. A basic assumption of the coding system is that dyadic interaction behavior is governed by the same learning principles that rule other forms of human behavior. In particular, the learning theory principle of reinforcement is defined as an increase in the probability of occurrence of some aspect of a particular behavior as a function of the contingent application of some other event or behavior, defined as the reinforcer (Premack, 1959, 1965; Skinner, 1938, 1953). Thus, one category of behavior control strategies included those behaviors which were theoretically defined as reinforcing events for the other spouse. The coding system was developed based on theoretical definitions of behavior control, and not on empirically-determined functional measures of behavior.

The interactions were first unitized into speeches which were defined as, "all words spoken by a single speaker from the time [s/he] starts to speak until [s/he] stops (Schultz, 1975, p. 563)." Ratings were made from audiotapes of the couples' interactions. When raters worked together for purposes of reliability estimates, they jointly determined, by consensus, the verbatim content of the speech unit. After raters agreed on the verbal content of the speech unit, they independently coded the speech

according to rules of the coding scheme.

Following 40 hours of training, a pool of eight raters were selected to code the data based on two criteria. The criteria were, (a) a score of 100% correct on a written test covering contents of the coding manual and (b) an average interrater trial reliability exceeding a kappa value of .60 for a minimum of 20 reliability training checks. Raters were given periodic retraining sessions in an effort to maintain an adequate level of interobserver reliability.

Criterion Measures

Criterion measures were based on the occurrences of behavior control and behavior non-control strategies by spouses. Behavior control strategies were defined as any form of verbal behavior that was theoretically consistent with social learning theory principles of behavior control, including processes of reinforcement, punishment, and instruction. Behavior control strategies were behaviors which would theoretically function to control, alter, change, or otherwise modify some future behavior of the spouse. Behavior non-control strategies were defined as any form of verbal behavior that was not theoretically consistent with or inclusive of social learning theory principles of behavior. Behavior non-control strategies were behaviors which would theoretically not be functional for changing or modifying behavior of the spouse. Examples of behavior coded as behavior control strategies include, "That's a good idea." (praise), "Would you go with me to the concert?" (request), or "You're never home when I need you." (criticism). Examples of behavior coded as behavior non-control

strategies include, "I want to go visit my mother." (statement about self) or "Are you saying that you are displeased with my decision?" (request for more information).

The actual criterion or dependent measures were taken at the dyadic level of analysis, as opposed to an individual level. The interaction processes that were analyzed were reciprocity scores, that is, the conditional probabilities of certain behavior by one spouse given certain behavior of the other. These relationally-defined units of behavioral sequences were the basis for four types of reciprocity measures, two symmetrical reciprocity behavioral sequences and two asymmetrical reciprocity behavioral sequences. The symmetrical reciprocity processes included the occurrence of a behavior control strategy of one spouse followed by a behavior control strategy of the other spouse (BCBC), and the occurrence of a behavior non-control strategy of one spouse followed by a behavior non-control strategy by the other spouse (BNCBNC). The asymmetrical reciprocity processes included the occurrence of a behavior control strategy (or behavior non-control strategy) followed by a behavior non-control strategy (or behavior control strategy) (BCBNC, BNCBC). The scores used in the analysis represent the conditional probability of each of the four sequences of behavior. Dyadic units of behavior, unlike individual measures of behavior, were defined jointly by the couples' interactions and reflect a conceptually different unit of behavior than individual or summated husband/wife scores.

Predictor Measures

The four predictor measures were: the two contextual variables, conflict and intimacy; role of spouse, wife or husband, and the individual couple.

The predictor variables, conflict and intimacy, were manipulated according to the issues given the couples for discussion.

Data Analysis

Canonical correlation or multivariate regression procedures (Finn, 1974; Harris, 1975; Hotelling, 1935; Tatsuoka, 1971) were used to analyze the interaction data. Canonical correlational analysis is useful for determining the variance accounted for in a set of multiple criterion measures by a set of multiple predictor variables. According to Kraemer and Jacklin (1979), the greater the extent to which statistical dependency exists between response measures for members of the same dyad, the more inappropriate univariate procedures become and the more necessary are multivariate techniques. The use of univariate procedures in cases of statistical dependency between criterion measures results in underestimating the error variance; thus, the liklihood of finding statistically significant results is increased. The canonical procedures were applied to the conditional probability of the four types of behavioral sequences or reciprocity measures.

Results

Reliability

The measure of reliability for the interaction scores was determined for individual speeches since the dyadic unit used for analysis was based on individual acts and not on session totals (Gelfand & Hartmann, 1976). The kappa statistic (Cohen, 1960; Fleiss, 1973; Gelfand & Hartmann, 1976) was used as the index of agreement in order to provide a conservative

measure of reliability by adjusting for chance agreements between observers.

Reliability estimates were determined for 30 of the 148 discussion sessions or for approximately 1,413 of the 6,972 speeches. The discussion issues used for reliability estimation were randomly selected with the restriction that the four experimental issues were selected equally often. Reliability estimates for the four experimental issues ranged from kappa = .46 to 1.00, with a median value of kappa = .72 and a mean value of kappa = .71.

Canonical Analysis of Interaction Data

The overall canonical correlation coefficient of the set of four criterion variables and four predictor variables was $R_c = .707$, $p < .00001$ ($S = 1$, $M = 1$, $N = 143$). Multivariate tests of significance for canonical correlation coefficients were performed according to Hotelling's criterion (Hotelling, 1935). Individual canonical correlation coefficients and percentages of variance explained by the canonical variates of the criterion and predictor variables is presented in Table 1.

Insert Table 1 about here

Interpretation of canonical analysis is facilitated by investigating pairs of orthogonal canonical variates, which can be interpreted as statistically distinct phenomena (Harris, 1975). The first pair of covariates represents a high intimacy, conflict situation associated with high rates of BCBC and BNCBC and low rates of BNCBNC. The second pair of covariates represents a high intimacy situation associated with high rates

of BCBC and low rates of BCBNC and BNCBC. The third pair of covariates represents a high intimacy, non-conflict situation associated with high rates of BCBC and BNCBNC and low rates of BCBNC and BNCBC. The final pair of covariates represents high rates of husbands' BC following wives' BNC and low rates of husbands' BNC following wives' BC. In the first three pairs of covariates, the couple variable was weighted as important to the interpretation of the canonical variate, although it was not possible within the present analyses to identify particular couples which contributed to the effect.

Insert Table 2 about here

Separate univariate analyses for each of the four criterion variables regressed against the four predictor variables was performed. The context of conflict was important for predicting the couples' interaction patterns of BCBC and BNCBC, whereas the context of non-conflict was effective for predicting interaction patterns of BNCBNC. A high-intimacy context was important for predicting patterns of BCBC, and a low-intimacy context was effective for predicting BCBNC and BNCBNC patterns of interaction. The couple variable was effective for predicting patterns of BNCBNC, but again it is impossible to know more about how couples contributed to the effect or in what manner they did so.

Insert Table 3 about here

Comparison of Sequential Patterns to Base Rates of Interaction

In order for the sequential patterns of behavior to have meaning as measures of communicational reciprocity and to be phenomena distinct from simple base rates, it is necessary to determine that the conditional probability of the interaction behavior exceeds the unconditional probability levels (Kraemer & Jacklin, 1979). T-tests for correlated means were conducted to test for differences between base rate and conditional probabilities of the interaction behaviors. The comparisons, BC vs. BCBC and BNC vs. BNCBNC, are tests of the hypothesis regarding symmetrical reciprocity, whereas the comparisons, BC vs. BNCBC and BNC vs. BCBNC, are tests of the hypothesis regarding asymmetrical reciprocity.

Insert Table 4 about here

The data indicate that the BCBC and BNCBNC interactional sequences represent symmetrical communicational reciprocity in that the rates of BCBC and BNCBNC are significantly greater than the base rates of BC and BNC alone. Although it is difficult to justify labeling the BCBNC and BNCBC interaction sequences as asymmetrical reciprocity, they were found to occur significantly less often than the base rates of BNC and BC, respectively, and so will be interpreted as phenomena distinct from the base rate behaviors although not indicative of reciprocity. The influence of the contexts, conflict and intimacy, can be interpreted as they relate to the symmetrical reciprocity of behavior control and behavior non-control interactions (BCBC and BNCBNC) and to the sequential patterns of behavior, BCBNC and BNCBC.

The importance of the context for interaction is interpreted for dyadic units of behavior, defined by the marital relationship, and not for individual husband and wife behaviors.

Discussion

Contextual Model of Interaction

Data from the present study support a contextual approach to the analysis of human interaction, a strategy which focuses on the influence of specific contexts for interpersonal exchanges(Argyle, 1979; Ginsburg, 1979). The contexts of interaction identified in the present study represent only two parameters within complex environments, but they provided a sufficient degree of predictability to account for significant portions of variance in the interaction sequences. Analysis of dyadic interaction of intimate relationships as a product of the contextual parameters within which it occurs provides an important source of information in addition to that offered by stable characteristics of the individual or relationship.

Congruent with a contextual model, interaction should be viewed as a function of an array of contextual systems operating in concert one with another. Contextual analysis of interaction could be expanded to include not only perceptual, attributional, or environmental antecedents to behavior, but also previous behavior within the interactional stream. The occurrence of specific behavior could be considered to function as a context for further behavior. For example, in the present study the occurrence of behavior control strategies could be viewed as a context for the subsequent occurrence of future behavior control strategies, an occasion for

symmetrical reciprocity in communication. One step further, the consequences of behavior could also be viewed as setting the contextual stage for further behavior. Coming full circle, contextual influences of interaction could include previous behavior and the consequences of previous behavior, as well as the antecedents to behavior. It is the latter type of contextual influence to which the present data apply.

Interpretation of Contextual Configurations

The contextual configurations discussed earlier were empirically derived as optimal combinations for explaining significant and orthogonal sources of variance in the interaction data. Interpretation of the relationship between individual contexts and separate patterns of interaction behavior should be cautious since it is the combination of the various interaction patterns together with combinations of contextual factors which are statistically and conceptually related.

Interpretation of the patterns of symmetrical reciprocity for behavior control and behavior non-control strategies, in light of other available data for reciprocity of couples' interaction processes (Azrin et al., 1973; Billings, 1979; Gottman et al., Weiss et al., 1973), suggests that both the reciprocity and the lack of reciprocity may be characteristic of successful marriages. Perhaps symmetrical reciprocity of behavior for well-functioning relationships can be expected to occur but only as a function of certain contextual influences, and the lack of symmetrical reciprocity of behavior can also be expected to occur but again only as a function of specific contextual variables. It may be the case that in some situations it is

important for the relationships to match, or reciprocate, the previous behavior of the spouse in order to either protect ones own territory or perhaps to provide an indication of a comparable level of trust or commitment. On the other hand, it is likely that in other situations where the partner's previous behavior is not so functional in predicting subsequent behavior, that something different is operating. Perhaps the couple is either more willing to explore less predictable patterns of interaction within a contextual environment where the lack of reciprocity is indicative of a creative, trusting relationship, or the lack of reciprocity is indicative of a relationship where spouse's behavior represents a lack of responsiveness to each other. Instead of looking at reciprocity as a function of rather static characteristics such as marital happiness, it may be more informative to consider the more dynamic variable of context, in conjunction with stable relationship or individual characteristics, as they apply to interaction processes.

A second issue, identified as a psychological risk factor, is empirically identified by high rates of controlling behavior and low rates of non-controlling behavior. Two contextual configurations are associated with some form of those interaction patterns. The first is a context of high intimacy conflict where two different response patterns emerge: (a) high rate of occurrence of controlling behavior, without regard to the partner's previous behavior, and (b) low rate of occurrence of non-controlling behavior even when the partner's previous behavior was non-controlling. The other context relevant to psychological risk is high level intimacy. It is associated with (a) high rate of occurrence of controlling behavior, but

reciprocal to the partner's previous controlling behavior, and (b) low rate of occurrence of non-controlling behavior following both controlling behavior and non-controlling behavior. The assumption of a risk factor related to these contextual patterns is only tentative, but it is suggested by many attempts at controlling spouse's behavior and few occurrences of non-controlling behavior. Frequent attempts to control the spouse's behavior, paired with few occurrences of non-controlling behavior, could be viewed as an effort to minimize the psychological risk by constraining the partner's behavior, thus reducing the degree of uncertainty that results from unpredictability in spouse's behavior. If the source of risk were perceived to rest with the spouse, increasing predictability in the spouse's behavior by ones own controlling behavior, would appear to be a reasonably functional strategy.

A final issue in the interpretation of the canonical variates is the differential influence of the husband and wife on the interaction process. The only pattern which emerged relating to the husband or wife role involved wives' behavior followed by husbands' behavior, but not the reverse, characterized by a low rate of BCBNC and a high rate of BNCBC. One implication of this response pattern is that husbands seem likely to take advantage of an optimal opportunity for control of their wife's behavior, namely when she has been engaging in non-controlling behavior. Husbands seem to be attempting to exercise control over their wife's behavior, even when she has not been doing the same in reverse. Perhaps it is the case that husbands and wives covertly agree to play out stereotypic roles between

them on certain occasions when they might otherwise not do so. This effect may reflect a subtle responsiveness to contextual cues.

Conflict and Intimacy as Contexts for Interaction

Conceptualization of conflict as a context, not as behavior, has empirically proven to be a visible perspective for research and perhaps for clinical purposes as well. Definitions of conflict which emphasize incompatible goals, principles, or interests (Coser, 1956; Miller & Simons, 1974) rather than behaviors or process (Deutsch, 1973) provide a great deal of compatibility with the perspective of conflict as a context for behavior. Nevertheless, the analysis of conflict and intimacy as antecedents to verbal interaction in marital relationships provides some interesting results.

As noted earlier, conflict is an important antecedent for predicting the occurrence of controlling behaviors regardless of the spouses' previous behavior (BCBC, BNCBC); whereas, the context of non-conflict is an effective predictor for the symmetrical reciprocity of non-controlling behavior (BNCBNC). This finding suggests that controlling behavior in conflict situations is not dependent upon the other spouses' behavior and in fact occurs regardless of the nature of spouses' previous behavior. Also, it appears that even in non-conflict situations the occurrence of non-controlling behavior is dependent upon the occurrence of non-controlling behavior of the partner. Knowing the level of conflict present in the context of a couples' interaction provides some predictability in the nature and degree of their controlling behavior.

The influence of topical intimacy as a context for interaction is apparent for three of the four patterns of reciprocal interaction. Highly intimate contexts, defined by the content issue but not necessarily by on-going behavior, allows prediction of symmetrical reciprocity of controlling behaviors (BCBC). In this sense, high intimacy and conflict situations function similarly in relation to their effect in producing symmetrical reciprocity of controlling behavior. Interaction associated with low intimacy contexts suggests that spouses' non-controlling behavior is not dependent upon the other spouses' previous behavior and occurs regardless of their behavior. Comparisons between non-conflict and low intimacy contexts suggest that non-controlling behavior occurs in each context, but that its occurrence is dependent upon the spouses' previous non-controlling behavior in the non-conflict, but not the low intimacy, situation. As with conflict, knowing the level of topical intimacy allows a certain degree of predictability about the nature and degree of couples' controlling behavior.

Implications for Marital and Family Therapy

The implications of results from the present study can be extended to the treatment of marital and family units. It seems reasonable to assume that intervention with dysfunctioning family systems or marital relationships should be based on information about normative interaction patterns of well-functioning relationships. The alternative leaves the family or marital therapist with only theoretical guidelines for establishing ideal or even functional goals of family interaction. Doubtless, there are a

variety of functional and normative patterns of interaction for non-distressed marital relationships, and the final evaluation of therapeutic intervention must rest with an assessment of outcome for the target relationship.

Given support for the influence of contextual factors on interaction patterns found in the present study, several implications for assessment and treatment of dysfunctional relationships are noted. First, the assessment of a distressed family or marital relationship should carefully consider the potential influence of perceptual, attributional, or environmental contexts as functional antecedents to distressing interactions (Ciminero, Calhoun, & Adams, 1977; Kanfer & Phillips, 1970), rather than global definitions of the relationship as dysfunctional. This approach to assessment would allow for recognition of functional patterns of behavior in an effort to identify strengths, as well as problem areas, in dysfunctional relationships. Second, treatment of dysfunctional relationships based on a contextual analysis of behavior could more readily target intervention toward specific behavioral changes, rather than to globally defined improvements in the relationship. Specific overt changes in spouses' behavior may likely affect changes in subjective feelings and perceptions of the relationship, which in turn would have implications for a couple's global evaluation of their relationship (Stuart, 1969).

New Directions

Observational data of the interaction patterns of intimate relationships is an important source of information in furthering our understanding of one of the most prevalent activities in which we engage. Continual

research is needed for many relationship forms, including friendship and love relationships other than marriage, family relationships involving parent-child and sibling interaction, and for a variety of relationship forms found in the work place. A contextual model of interaction can provide a viable approach to the study of those interaction processes as a function of contextual cues that are salient to the relationship. By focusing on contextual variation as a means of stimulus control for significant relationship interactions, we may discover a great deal more of the complexities of human interaction in intimate relationships which can then be applied to methods of clinical intervention.

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Table 1

Canonical Correlation Coefficients[1] for

Four Criterion and Four Predictor Variables

Root	Canonical correlation coefficient	Percentage variance explained by the canonical variates of the criterion variable	Percentage variance explained by the canonical variates of the predictor variables
1	.35*	.29	.25
2	.32*	.30	.25
3	.15*	.26	.25
4	.12*	.15	.25

[1]Overall canonical correlation, R_c= .707

*p <.05

Table 2

Correlations of Variables with Canonical Variates

	Pairs of canonical variables 1	2	3	4
Criterion variables:				
BCBC	.79[1]	.47[1]	.36[1]	-.16
BCBNC	-.18	-.86[1]	-.34[1]	-.32[1]
BNCBNC	-.35[1]	-.47[1]	.79[1]	-.17
BNCBC	.63[1]	-.04	-.38	.68[1]
Predictor variables:				
Conflict	-.80[1]	.12	.54[1]	-.23
Intimacy	-.36[1]	-.87[1]	-.34[1]	-.00
Couple	.40[1]	-.47[1]	.76[1]	.18
Role	-.27	.11	-.01	.96[1]

[1]Coefficients used in interpretation of canonical variates.

Table 3

Univariate Regression Analysis

Predictor Variables	Beta Weight	T-value
	Criterion variable: BCBC	
Conflict	-.167	-3.012**
Intimacy	-.252	-4.539***
Couple	.078	1.397
Role	-.075	-1.359
	Criterion variable: BCBNC	
Conflict	-.002	-0.045
Intimacy	.284	5.077***
Couple	.061	1.096
Role	-.051	-0.910
	Criterion variable: BNCBNC	
Conflict	.151	2.650**
Intimacy	.135	2.370*
Couple	.111	1.942*
Role	-.004	-0.069
	Criterion variable: BNCBC	
Conflict	-.227	-3.995***
Intimacy	-.049	-0.867
Couple	.064	1.119
Role	.016	.287

*p<.05
**p<.01
***p<.001

Table 4

Comparison of Base Rate and Sequential Data

Base rate data[1]	Sequential data[2]	t-value	df	p-value
BC $\overline{X}$ = .40	BCBC $\overline{X}$ = .44	-3.28	295	<.01
BNC $\overline{X}$ = .42	BNCBNC $\overline{X}$ = .46	-3.44	295	<.01
BC $\overline{X}$ = .40	BNCBC $\overline{X}$ = .34	+4.38	295	<.01
BNC $\overline{X}$ = .42	BCBNC $\overline{X}$ = .34	+7.41	295	<.01

[1]reflects unconditional probabilities

[2]reflects conditional probabilities